General

Guideline Title

Long-acting reversible contraception: implants and intrauterine devices.

Bibliographic Source(s)

American College of Obstetricians and Gynecologists (ACOG). Long-acting reversible contraception: implants and intrauterine devices. Washington (DC): American College of Obstetricians and Gynecologists (ACOG); 2011 Jul. 13 p. [95 references]

Guideline Status

This is the current release of the guideline.

This guideline updates a previous version: American College of Obstetricians and Gynecologists (ACOG). Intrauterine device. Washington (DC): American College of Obstetricians and Gynecologists (ACOG); 2005 Jan. 10 p. (ACOG practice bulletin; no. 59). [74 references]

Recommendations

Major Recommendations

The grades of evidence (I-III) and levels of recommendation (A-C) are defined at the end of the "Major Recommendations" field.

Summary of Recommendations and Conclusions

The following recommendation and conclusion are based on good and consistent scientific evidence (Level A):

- Routine antibiotic prophylaxis to prevent pelvic infection is not recommended before intrauterine device (IUD) insertion.
- Insertion of a copper IUD is the most effective method of postcoital contraception when inserted up to 5 days after unprotected intercourse.

The following recommendations and conclusions are based on limited or inconsistent scientific evidence (Level B):

- IUDs may be offered to women with a history of ectopic pregnancy.
- Insertion of the implant is safe at any time in nonbreastfeeding women after childbirth.
- Implants may be offered to women who are breastfeeding and more than 4 weeks after childbirth.
- Insertion of an IUD or implant immediately after either an abortion or miscarriage is safe and effective.
- Immediate postpartum IUD insertion, which is an insertion within 10 minutes of placental separation, appears safe and effective.

The following recommendations and conclusions are based primarily on consensus and expert opinion (Level C):

- The *U.S. Medical Eligibility Criteria for Contraceptive Use* classifies placement of an implant in breastfeeding women less than 4 weeks

after childbirth as Category 2 because of theoretic concerns regarding milk production and infant growth and development.
- Nulliparous women and adolescents can be offered long-acting reversible contraceptive (LARC) methods, including IUDs.
- The U.S. Food and Drug Administration (FDA) and the World Health Organization (WHO) recommend that IUDs be removed from pregnant women when possible without an invasive procedure.
- Long-acting reversible contraceptive methods have few contraindications, and almost all women are eligible for implants and IUDs.
- Insertion of an IUD or an implant may occur at any time during the menstrual cycle as long as pregnancy may be reasonably excluded.
- For women at high risk of sexually transmitted infections (STIs) (e.g., aged 25 years or younger or having multiple sex partners), it is reasonable to screen for STIs and place the IUD on the same day (and administer treatment if the test results are positive) or when the test results are available.
- Long-acting reversible contraceptive methods have an effect on menstrual bleeding, and patients should be given anticipatory guidance about these effects.
- An endometrial biopsy may be performed without removing the IUD. Cervical colposcopy, cervical ablation or excision, or endometrial sampling, may be performed with an IUD left in place.

Definitions:

Grades of Evidence

I: Evidence obtained from at least one properly designed randomized controlled trial.

II-1: Evidence obtained from well-designed controlled trials without randomization.

II-2: Evidence obtained from well-designed cohort or case–control analytic studies, preferably from more than one center or research group.

II-3: Evidence obtained from multiple time series with or without the intervention. Dramatic results in uncontrolled experiments also could be regarded as this type of evidence.

III: Opinions of respected authorities, based on clinical experience, descriptive studies, or reports of expert committees.

Levels of Recommendations

Level A — Recommendations are based on good and consistent scientific evidence.

Level B — Recommendations are based on limited or inconsistent scientific evidence.

Level C — Recommendations are based primarily on consensus and expert opinion.

Clinical Algorithm(s)

None provided

Scope

Disease/Condition(s)

Unintended pregnancy

Guideline Category

Prevention

Technology Assessment

Clinical Specialty

Family Practice

Obstetrics and Gynecology

Intended Users

Physicians

Guideline Objective(s)

- To aid practitioners in making decisions about appropriate obstetric and gynecologic care
- To provide information for appropriate candidate selection and the management of clinical issues and complications associated with long-acting reversible contraception (LARC) use

Target Population

Women and adolescent girls of child-bearing capability who desire contraception

Interventions and Practices Considered

Long-acting reversible contraception

- Copper T380A intrauterine device (IUD)
- Levonorgestrel intrauterine system
- Contraceptive implants

Major Outcomes Considered

- Pregnancy rates
- Incidence of complications (e.g., pelvic inflammatory disease)
- Contraception continuation rate

Methodology

Methods Used to Collect/Select the Evidence

Hand-searches of Published Literature (Primary Sources)

Hand-searches of Published Literature (Secondary Sources)

Searches of Electronic Databases

Description of Methods Used to Collect/Select the Evidence

The MEDLINE database, the Cochrane Library, and the American College of Obstetricians and Gynecologists' own internal resources and documents were used to conduct a literature search to locate relevant articles published between January 1990 and February 2011. The search was restricted to articles published in the English language. Priority was given to articles reporting results of original research, although review articles and commentaries also were consulted. Abstracts of research presented at symposia and scientific conferences were not considered adequate for inclusion in this document. Guidelines published by organizations or institutions such as the National Institutes of Health and the American College of Obstetricians and Gynecologists were reviewed, and additional studies were located by reviewing bibliographies of identified

articles.

Number of Source Documents

Not stated

Methods Used to Assess the Quality and Strength of the Evidence

Weighting According to a Rating Scheme (Scheme Given)

Rating Scheme for the Strength of the Evidence

Studies were reviewed and evaluated for quality according to the method outlined by the U.S. Preventive Services Task Force:

I: Evidence obtained from at least one properly designed randomized controlled trial.

II-1: Evidence obtained from well-designed controlled trials without randomization.

II-2: Evidence obtained from well-designed cohort or case–control analytic studies, preferably from more than one center or research group.

II-3: Evidence obtained from multiple time series with or without the intervention. Dramatic results in uncontrolled experiments also could be regarded as this type of evidence.

III: Opinions of respected authorities, based on clinical experience, descriptive studies, or reports of expert committees.

Methods Used to Analyze the Evidence

Review of Published Meta-Analyses

Systematic Review

Description of the Methods Used to Analyze the Evidence

Not stated

Methods Used to Formulate the Recommendations

Expert Consensus

Description of Methods Used to Formulate the Recommendations

Analysis of available evidence was given priority in formulating recommendations. When reliable research was not available, expert opinions from obstetrician–gynecologists were used. See also the "Rating Scheme for the Strength of Recommendations" field regarding Grade C recommendations.

Rating Scheme for the Strength of the Recommendations

Based on the highest level of evidence found in the data, recommendations are provided and graded according to the following categories:

Level A — Recommendations are based on good and consistent scientific evidence.

Level B — Recommendations are based on limited or inconsistent scientific evidence.

Level C — Recommendations are based primarily on consensus and expert opinion.

Cost Analysis

In an economic analysis, both types of intrauterine devices (IUDs) (copper T380A and levonorgestrel intrauterine system) were among the three least expensive contraceptive methods over a 5-year period.

Method of Guideline Validation

Internal Peer Review

Description of Method of Guideline Validation

Practice Bulletins are validated by two internal clinical review panels composed of practicing obstetrician-gynecologists generalists and sub-specialists. The final guidelines are also reviewed and approved by the American College of Obstetricians and Gynecologists (ACOG) Executive Board.

Evidence Supporting the Recommendations

Type of Evidence Supporting the Recommendations

The type of supporting evidence is identified and graded for each recommendation (see the "Major Recommendations" field).

Benefits/Harms of Implementing the Guideline Recommendations

Potential Benefits

Appropriate use of long-acting reversible contraceptives

Potential Harms

Intrauterine Devices (IUDs)

- The most common adverse effects reported with the copper IUD are abnormal bleeding and pain.
- Some women may experience hormone-related effects, such as headaches, nausea, breast tenderness, depression, and cyst formation, with the levonorgestrel intrauterine system.
- Overall, complications with IUDs are uncommon and mainly include expulsion, method failure, and perforation.
- Complications of continuing a pregnancy with an IUD in place include an increased risk of spontaneous abortion and septic abortion.
- Overall, difficulties with IUD insertion rarely occur. Difficulties that have been reported include vasovagal reaction, the need for cervical dilation, severe pain, inability to insert the IUD, and uterine perforation.
- A pregnancy conceived with a levonorgestrel intrauterine system that is retained raises the theoretic concern of the effect of fetal exposure to hormones.

Contraceptive Implants

- After implant insertion, changes in menstrual bleeding patterns are common and include amenorrhea or infrequent, frequent, or prolonged bleeding. Other reported adverse effects include gastrointestinal difficulties, headaches, acne, breast pain, vaginitis, and weight gain.
- Complications related to implant insertion (1.0%) and removal (1.7%) are uncommon. Insertion complications include pain, slight bleeding, hematoma formation, difficult insertion, and unrecognized noninsertion. Removal may be complicated by breakage of the implant and

inability to palpate or locate the implant because of deep insertion.

- The contraceptive implant may have an effect on carbohydrate metabolism by causing mild insulin resistance, with no significant change in serum glucose levels in normal women.
- Between 6% and 12% of implant users in contraceptive studies report weight gain but few discontinue the implant because of weight change.
- 10–14% of users experience a worsening of acne symptoms.

Contraindications

Contraindications

Immediate postpartum insertion of an intrauterine device (IUD) is contraindicated among women in whom peripartum chorioamnionitis, endometritis, or puerperal sepsis is diagnosed. The International Planned Parenthood Federation, in collaboration with the World Health Organization (WHO) and other international organizations, developed guidelines that include the restriction of IUD insertion within 3 months of treatment of puerperal sepsis.

Qualifying Statements

Qualifying Statements

These guidelines should not be construed as dictating an exclusive course of treatment or procedure. Variations in practice may be warranted based on the needs of the individual patient, resources, and limitations unique to the institution or type of practice.

Implementation of the Guideline

Description of Implementation Strategy

An implementation strategy was not provided.

Implementation Tools

Audit Criteria/Indicators

Foreign Language Translations

Patient Resources

For information about availability, see the *Availability of Companion Documents* and *Patient Resources* fields below.

Institute of Medicine (IOM) National Healthcare Quality Report Categories

IOM Care Need

Staying Healthy

IOM Domain

Effectiveness

Patient-centeredness

Identifying Information and Availability

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Adaptation

Not applicable: The guideline was not adapted from another source.

Date Released

2005 Jan (revised 2011 Jul)

Guideline Developer(s)

American College of Obstetricians and Gynecologists - Medical Specialty Society

Source(s) of Funding

American College of Obstetricians and Gynecologists (ACOG)

Guideline Committee

American College of Obstetricians and Gynecologists (ACOG) Committee on Practice Bulletins-Gynecology

Composition of Group That Authored the Guideline

American College of Obstetricians and Gynecologists (ACOG) committees are created or abolished and their overall function defined by the Executive Board. Appointments are made for one year, with the understanding that such appointment may be continued for a total of three years. The majority of committee members are Fellows, but Junior Fellows also are eligible for appointment. Some committees may have representatives from other organizations when this is particularly appropriate to committee activities. The president elect appoints committee members annually.

Financial Disclosures/Conflicts of Interest

Not stated

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Guideline Availability

Electronic copies: None available

Print copies: Available for purchase from the American College of Obstetricians and Gynecologists (ACOG) Distribution Center, PO Box 933104, Atlanta, GA 31193-3104; telephone, 800-762-2264, ext. 192; e-mail: sales@acog.org. The ACOG Bookstore is available online at the ACOG Web site.

Availability of Companion Documents

A proposed performance measure is included in the original guideline document.

Patient Resources

The following is available:

- The intrauterine device. Atlanta (GA): American College of Obstetricians and Gynecologists (ACOG); 2007. Electronic copies: Available from the American College of Obstetricians and Gynecologists (ACOG) Web site. Copies are also available in Spanish.

Print copies: Available for purchase from the American College of Obstetricians and Gynecologists (ACOG) Distribution Center, PO Box 933104, Atlanta, GA 31193-3104; telephone, 800-762-2264, ext. 192; e-mail: sales@acog.org. The ACOG Bookstore is available online at the ACOG Web site.

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NGC Status

This NGC summary was completed by ECRI Institute on October 10, 2007. The information was verified by the guideline developer on December 3, 2007. The information was reaffirmed by the guideline developer in 2009 and updated by ECRI Institute on December 17, 2010. This NGC summary was updated by ECRI Institute on August 29, 2011.

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